

MoDOT RESULTS

Safety. Service. Stability.



MoDOT RESULTS

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“We will do the best we can with
what we have for as long as we can.”

SAFETY

Be Safe

Be Accountable

SERVICE

Be Respectful
Be Inclusive

Be Bold
Be Better

STABILITY

Be One Team
So we can be a
great organization

MoDOT Delivers Results

The Missouri Department of Transportation is mission-centered. By focusing on customers and providing transparent measures of our progress, MoDOT delivers results through accountability, innovation and efficiency.

We developed a system of performance metrics to deliver results while being good stewards of the state's transportation dollars.

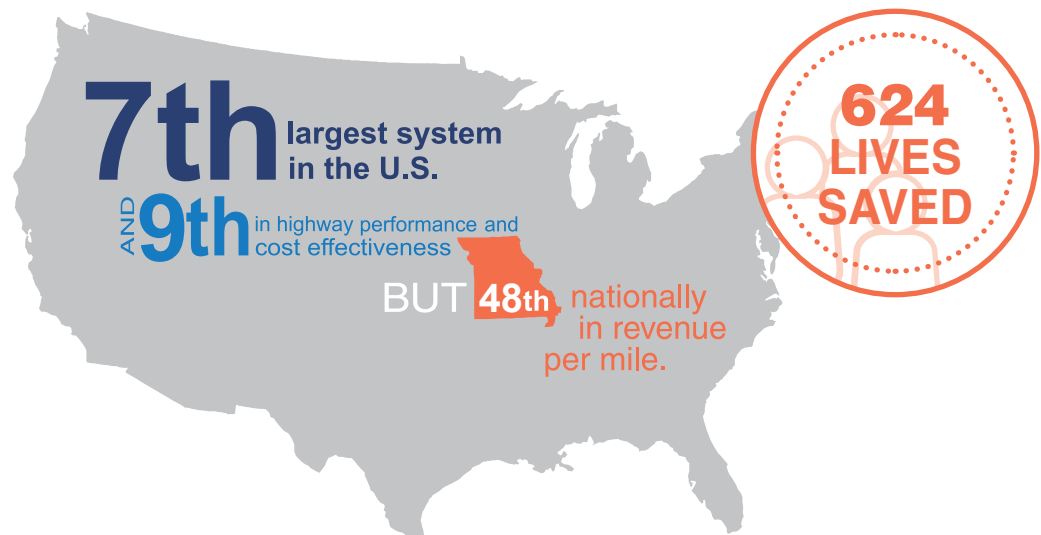
Since 2007, MoDOT documented more than **\$4.8 billion** in one-time or on-going savings. This includes redirection of \$305 million in efficiency savings in 2018 to roads and bridges and \$638 million in savings to our customers. In the last 10 years, efficiencies and safety enhancements resulted in 624 lives saved.

MoDOT is not afraid to make tough decisions. We realized years ago that we could not provide customers' top needs without a change in the way we do business. As a result, we decided we will do the best we can with what we have for as long as we can.

By reexamining all we do from project design to daily operation, we were able to identify savings and transfer funds to meet more customer expectations. That wasn't enough.

In 2010, we began a reduction of 124 facilities, 750 pieces of equipment and 1,200 employees (19 percent) resulting in \$993 million reinvested in roads and bridges through 2018.

MoDOT's core values are safety, service and stability. With those pillars as our foundation, MoDOT is committed to preserving the transportation system which is essential to Missouri's economic growth.



SAFETY

Design-Build Project Focuses on Safety Improvements

MoDOT's St. Louis District Safety Design-Build project made safety improvements at 16 locations across Franklin County and 15 locations in St. Charles County.

All of these improvements were designed to prevent fatal and serious crashes. Over a 10-year period, the improvements are expected to reduce the number of fatal and serious injury crashes by **more than 70 people**.

Some of the safety improvements include:

- 35 miles of high friction surface treatment
- 25 miles of edgeline rumble stripes and 37 miles of centerline rumble stripes
- 682 chevron signs installed at 61 curves, and
- Flashing beacons installed at 17 stop signs



Road to Saving Lives

Using the Design-Build method, MoDOT was able to implement the safety solutions quickly, efficiently and cost effectively. Design-Build is a project delivery method that combines both the design and construction phases into one contract, which saves time and resources. MoDOT provides the project goals, budget and schedule, and the contractor team completes the work.

The \$24 million project started in July of 2017 and was completed in 2018. These safety improvements will bring Missouri's Blueprint vision of zero deaths from vehicle crashes one step closer to reality. The Blueprint serves as a guide to reach the Missouri Coalition for Roadway Safety's goal of reducing traffic crashes to 700 or less by 2020.

% Major Highways in Good Condition

% Overall Customer Satisfaction

* Survey not conducted for these years.



Having goals isn't enough. With the help of our partners, we continuously improve our performance and hold ourselves accountable to our customers.

RESULTS



SAFETY

KEEPING ALL TRAVELERS SAFE

\$1 Billion in Safety Benefits, 100 Lives Saved

The Smooth Roads Initiative and Better Roads, Brighter Future programs were back-to-back efforts that improved 5,600 miles of highways. Completed earlier than scheduled, the efforts delivered smoother pavement, brighter striping, rumble stripes and other safety improvements to the highways that carry 80 percent of Missouri's traffic. These improvements have resulted in more than \$1 billion of safety benefits to the customers since 2007.



BEST PRACTICES

SAFETY COMMITMENT

Improving Work Zone and Traffic Safety

MoDOT uses innovation and research to improve work zone and system safety. MoDOT pursues approaches to program delivery and project management that deliver the best possible value to Missouri taxpayers and use existing resources wisely. In an effort to increase safety, temporary rumble strips are placed in work zones. When applicable, MoDOT uses high-grip surface treatments and has achieved a 20 percent reduction in run-off-road crashes in areas with a high rate of incidents.



DESIGN CONCEPTS

STATE-OF-THE-ART DESIGN

\$489 Million in Total Savings, 59 Lives Saved

The Diverging Diamond Interchange, first used in Springfield, Missouri in 2009, solves major traffic and safety issues at a much lower cost than traditional interchange designs. Missouri now has 24 DDI Intersections. Many other states have followed suit, with at least one DDI of their own. J-Turns are a cost-effective alternative to an overpass on four-lane highways and reduce the number and severity of crashes. At locations where J-Turns were installed, crashes are down 25 percent and there are 88 percent fewer fatalities. Missouri also uses shared four-lane highways that feature alternating passing lanes that give motorists periodic opportunities to pass without pulling into the opposing lane.



INNOVATION

INNOVATIONS CHALLENGE

300 Best Practices

Employees are encouraged to submit their innovations to improve safety, efficiency and productivity. For example, a machine called JAWS is mounted on a truck and includes an automated drop down skid-plate that can 'scoop' debris off the roadway where it can be picked up in a safer manner. Another innovation allows a TMA driver to remotely operate a stop-slow paddle, a digital message and a panic air horn from the safety of the truck's cab. Since 2007, the Innovations Challenge has generated more than 1,300 employee innovations with 300-plus chosen as MoDOT best practices.

SERVICE

Using Resources Wisely: Combining Construction and Maintenance

During bridge work that closed down part of Interstate 70 near Kansas City in June 2018, MoDOT crews used the opportunity to do much-needed maintenance on the interstate.

Crews were able to do about a month's worth of work in two days. This maximized resources and saved motorists from future traffic impacts because work was done while the road was already closed. Also, crews were able to work without the potential dangers of moving traffic.

Some of the work completed included:

- Cleaned 22 drains and flushed out six clogged pipes that were causing drainage issues. Pipes are more than 70 feet long and three feet wide.
- Flushed eastbound and westbound I-70 bridges over U.S. Route 40 and Sterling Avenue.
- Patched eastbound and westbound I-70 from Manchester to Route 291 using three tons of patching mix.
- Swept from Manchester to Route 291.
- Swept the barrier walls on several bridges and ramps.
- Collected four truckloads of trash.

Maximizing resources demonstrates the department's commitment to fiscal responsibility by being good stewards and using taxpayer dollars wisely.

Responding to historic flooding

MoDOT also responds to natural disasters. When the state was hit with historic flooding in 2017, three state bridges were a total loss: Ozark County Route CC over North Fork White River at Dora, Pulaski County Route NN over Elliot Branch and Ozark County Route PP over North Fork River.

All three have since been replaced, with the Route PP bridge earning a **Grand Award** for quality engineering achievements from the American Council of Engineering Companies of Missouri. In addition, the two bridge replacement projects in Ozark County were honored with **regional America's Transportation Awards**.

“Innovation is woven into MoDOT's culture and is embraced by our partners.”

RESULTS



PRACTICAL OPERATIONS

CUSTOMER PRIORITIES

\$274 Million in Total Savings

MoDOT focuses on citizen priorities when redesigning everyday operations. By installing more efficient LED signals, reassessing signing priorities and using incarcerated crews where practical, \$253 million more is available for roads and bridges annually. Additional savings resulted by merging multiple software contracts into one and scrutinizing every aspect of traffic signal design and operation.



ECONOMIC DEVELOPMENT

KEEPING BUSINESSES MOVING

\$91 Million in Total Customer Savings

Missouri's economic health depends on the efficient movement of the goods it produces and consumes. MoDOT Carrier Express, our first-in-the-nation online business portal, streamlines Missouri-based motor carriers' business transactions with the state — getting their drivers and the products they haul on the road in record time. The system, a **Computerworld Honors Laureate** honoree, saves customers \$6.5 million annually.



INNOVATIVE CONTRACTING

INNOVATIVE PROCUREMENT

\$290 Million Redirected to Roads and Bridges

MoDOT uses Alternative Technical Concepts to provide solutions that are equal or better to the original bid requirement. ATCs have been used on multiple projects since 2007. Looking to copy private-sector success, legislators authorized Design-Build project delivery. MoDOT has delivered 10 Design-Build projects that were completed 60 months ahead of schedule. Concentrating on project goals, innovation, schedule and budget, construction is completed more efficiently, with less impact on travelers.



USE OF RESOURCES

RECYCLED MATERIALS

\$298 Million Saved from 2007-2018

Like many other organizations, MoDOT recycles office paper, ink cartridges and the like. In addition, we use recycled shingles, tires, asphalt and other materials to deliver the best pavement with cost — and the environment — in mind.

Route 65: The Rebuild

Route 65: The Rebuild in Springfield is one of America's 12 best transportation projects.



In April, 35 state departments of transportation nominated 79 projects for consideration in the 11th annual America's Transportation Award competition sponsored by the American Association of State Highway and Transportation Officials (AASHTO), Socrata, AAA and the U.S. Chamber of Commerce.

The Route 65 project was honored by the Mid-America Region in the Quality of Life/Community Development Category (small projects, less than \$25 million), making it eligible for the national award.

In 2017, MoDOT's Southwest District embarked on a \$7.9 million project to rebuild the original, concrete pavement on Route 65 in Springfield between Kearney Street and Sunshine Street. Over 42 days, Route 65 was closed in short sections between interchanges to remove 1970s-era pavement and replace it.

Innovative bridge project extends life of major St. Louis bridge

An innovative and cost-effective bridge slide project in St. Louis helped improve safety and ease traffic congestion on the Poplar Street Bridge over the Mississippi River.

It was part of a \$54 million overhaul aimed at extending the life of the bridge another 25 to 30 years. The Poplar Street Bridge opened in 1967 and was never designed to carry the amount of traffic it does today.

Construction crews "slid" the eastbound lanes of the I-64/I-55 bridge nine feet to the south so an extra driving lane could be added. The entire project took about a year, compared to three or four years and about \$1 billion to build a new bridge.

RESULTS



EFFICIENT OPERATIONS

TAKING CARE OF OUR SYSTEM

\$112 Million Saved by Adjusting Mowing, Striping Cycles

Starting in 2011, MoDOT adjusted its mowing schedule on low-volume highways to shift more of the budget to Missouri's roads and bridges each year without sacrificing safety. Stripes on low-volume highways show less wear than those on major roads, so the minor route restriping schedule was extended. As a result, MoDOT sold 30 percent of its specialized striping equipment and reassigned employees to other needed work.



PRACTICAL DESIGN

DESIGNING FOR EFFICIENCY

\$1.5 Billion Savings

MoDOT is the birthplace of the Practical Design concept. Under the rallying cry of "Build Chevys – not Cadillacs," MoDOT focused on core traveler needs and controlled costs. The effort earned the **AASHTO President's Transportation Award** and became a Federal Highway Administration standard.



INNOVATIVE FINANCE

FINANCIAL RESPONSIBILITY

\$68 Million in Additional Savings

MoDOT refinanced and paid off some bond debt years early, saving \$68 million for roads and bridges.

\$1.3 Billion in Additional Funds

Communities contribute to state highway projects to receive needed upgrades faster. If custom, decorative work is desired, those costs are contributed, too. In the last 10 years, locals shared \$1.3 billion in additional local or federal funding to MoDOT projects.



CONNECTIONS & CHOICES

MOVING FREIGHT

Improved Capacity and Operation

Increased investment in Missouri ports improved capacity and operation. Nearly four million tons of freight moves through Missouri's ports each year – the equivalent of more than 150,000 trucks. That is an increase of 62 percent since 2011. MoDOT also works to improve connections and choices for travelers and businesses. By partnering with railroads to invest in corridor improvements, Missouri's Amtrak ridership saw about a 1.8 percent growth in FY 2017. Nationwide, Amtrak ridership grew by 1.5 percent.

STABILITY

DELIVERING RESULTS

We continue to complete projects on budget and on time.

State Fiscal Year 2018

381 projects completed

6.0 percent under budget

93 percent completed on time.

Over the last 10 years

4,405 projects worth

\$12.1 billion completed

7.1 percent (\$921 million) under budget

94 percent completed on time.

Route 47 over the Missouri River – Franklin and Warren Counties

MoDOT, along with the city of Washington, Franklin County and Warren County, is replacing the deteriorating 1936 Missouri River Bridge, located on Route 47. The project is expected to cost \$69 million, which includes a combination of federal, state and local funds and a Transportation Investment Generating Economic Recovery (TIGER) Grant. The new bridge is expected to open to traffic in December.

U.S. Route 54 “Champ Clark Bridge” over the Mississippi River – Pike County

Construction began in the fall of 2017 on a new bridge over the Mississippi River, connecting Louisiana, Missouri with the state of Illinois. The estimated cost of \$65 million will be split between Missouri and Illinois. The project also received a Transportation Investment Generating Economic Recovery (TIGER) Grant from the U.S. Department of Transportation. The new bridge is expected to be completed by November 2019.



CONTACT

For More Information

ADDITIONAL INFORMATION

Citizens Guide to Transportation Funding in Missouri

www.modot.org/guidetotransportation/

TRACKER: Measures of Performance

www.modot.org/about/Tracker.htm

Appendices and Additional Documents

www.modot.org/Results/Documents.html



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